IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re application of : **Confirmation No. 1381**

Giovanni Pietro CHIAVAROTTI et al. : Docket No. 2000-1545

Serial No. 09/707,885 : Group Art Unit 1745

Filed November 8, 2000 : Examiner M. Ruthkosky

PROCESS FOR PRODUCING AN ELECTRODE AND USE OF THE ELECTRODE :

THE COMMISSIONER IS AUTHORIZED TO CHARGE ANY DEFICIENCY IN THE FEE FOR THIS PAPER TO DEPOSIT ACCOUNT NO. 23-0975.

RESPONSE AFTER FINAL REJECTION

Assistant Commissioner for Patents,
Washington, D.C.

Sir:

Responsive to the Office Action of October 29, 2002, the time for responding thereto being extended for one month in accordance with a Petition for Extension of Time submitted concurrently herewith, Applicants submit the following remarks in support of the patentability of the present invention over the disclosure of the reference relied upon by the Examiner in rejecting the claims. Further and favorable reconsideration is respectfully requested in view of these remarks.

Interview

Applicants express their appreciation for the courtesy of a telephone interview granted to their attorney by Examiner Ruthkosky on February 27, 2003.

No agreement was reached at the conclusion of the interview.

During the interview, Applicants' attorney noted that the parent application of the present divisional application has issued as USP 6,428,842, on August 6, 2002; and that the claims of the parent patent are directed to a process for producing an impermeable or substantially impermeable electrode suitable for use in an electrolytic capacitor or battery, the significance of which was discussed during the interview, as will be indicated below. The interview also encompassed a

discussion of the Yamada et al. reference, which is the only reference applied by the Examiner in rejecting the claims.

Patentability Arguments

The rejection of claims 15 and 18-20 under 35 U.S.C. §102(b) as being anticipated by Yamada et al. (USP 5,723,232) is respectfully traversed.

This reference discloses a carbon electrode for a nonaqueous secondary battery which comprises a metal collector serving to catalyze carbon graphitization, graphite particles, and a carbon material having a lower crystallinity than the graphite particles, the graphite particles and the carbon material being sintered together on the metal collector or in the presence of the metal collector. (Column 3, lines 27-33)

Yamada et al. never mentions that the electrode is impermeable or substantially impermeable. Quite to the contrary, the reference actually suggests that the electrode is not impermeable or substantially impermeable, as indicated, for instance, in the disclosure beginning at column 4, line 52, where the reference refers to a porosity of 60-95%, representing the ratio between voids and solids, and the different electric properties ascribed thereto. Reference in this regard is also made to Fig. 4, from which it is apparent that porosities lower than 60% result in reduced electrical properties. The same can be said for the density of the active material.

It is apparent that the electrode of Yamada et al. is a spongy electrode, which permits infiltration of electrolyte through voids between the particles, as illustrated in Fig. 2 of the reference.

This is confirmed by the data in the reference concerning the active substance density of the electrode. As noted during the interview, graphite generally has a density of 2.25 g/cm^3. Example 1 of Yamada et al. results in an electrode having an active substance density of only 0.85 g/cm^3 (column 9, lines 66-67); and Comparative Example 1 results in an electrode having an active substance density of only 0.92 g/cm^3 (column 10, line 62). This confirms that the electrode structure is one which can be characterized as foamy or spongy, but certainly not impermeable or substantially impermeable. This characterization of the reference electrode is consistent with Fig. 2 of the reference and Applicants' argument that the electrolyte infiltrates the electrode.

As indicated above, the parent application of the present divisional application has issued as a patent. Claim 1 of the patent follows very closely the wording of the description of the process for

producing the electrode as set forth in the paragraph bridging pages 1 and 2 of the present application.

In the present Office Action, in responding to Applicants' previous patentability arguments, the Examiner takes the position that the method disclosed in the present application for producing the electrode is similar to that set forth in the Yamada et al. reference. Specifically, the Examiner notes that Applicants have argued in the present invention the drying is done at 80-150°C and the heat treatment is at 200-450°C, compared to Comparative Example 1 in Yamada et al., where the drying is done at 60°C and the heat-treatment is at 240°C. The Examiner then concludes that Comparative Example 1 of Yamada et al. anticipates the claims of the present application.

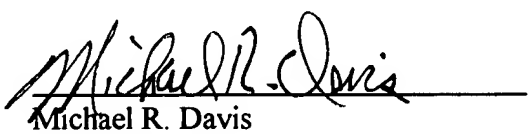
However, as noted during the interview, the same Yamada et al. reference relied upon by the Examiner in rejecting the claims of the present application, was considered by the Examiner before allowing the now patented claims of the parent application. Considerable discussion was presented concerning Comparative Example 1 of Yamada et al. The fact that the claims of the parent application, directed to a process for producing the electrode, were allowed over the Yamada et al. reference, after giving due consideration to Comparative Example 1 of this reference, establishes that not only are the processes not the same or similar, but they are patentably distinct from each other.

For these reasons, Applicants take the position that the presently claimed invention is clearly patentable over the Yamada et al. reference.

Therefore, in view of the foregoing remarks, it is submitted that the ground of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

Giovanni Pietro CHIAVAROTTI et al.

By: 

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